

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A pharmaceutical composition for application at a biodegradable plate-containing site requiring new bone; or cartilage or connective tissue formation in a subject, comprising a plurality of bone marrow stromal cells (MSCs) and a pharmaceutically acceptable polymer,

wherein the MSCs are isolated from the subject, are transduced *in vitro* after isolation from the subject with wherein the MSCs comprise a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter, and are applied at the biodegradable plate-containing site. and a pharmaceutically acceptable polymer.
2. (Original) The composition as recited in Claim 1 wherein the polymer is selected from a group consisting of alginate and collagen.
3. (Original) The composition as recited in Claim 1 wherein the MSCs are present in a concentration of about 50×10^6 per ml of the polymer.
4. (Previously Amended) The composition as recited in Claim 1 wherein the polymer is collagen type I.
5. (Currently Amended) A method of enhancing new bone; or cartilage or connective tissue formation in a subject, comprising:

- a. obtaining a plurality of bone marrow stromal cells (MSCs) from ~~a~~ the subject;
- b. transducing the MSCs of step a) with a replication-deficient viral vector comprising a DNA sequence encoding BMP-2 operably linked to a promoter to generate BMP-2 protein producing MSCs;
- c. applying a biodegradable plate to a site requiring new bone; or cartilage ~~or~~ connective tissue formation on the subject; and
- d. applying a composition comprising the BMP-2 protein producing MSCs and a pharmaceutically acceptable polymer to the site,

such that new bone; or cartilage ~~or connective tissue~~ formation is enhanced.

6. (Currently Amended) The method as recited in Claim 5 wherein the ~~DNA sequence encoding BMP-2 is transferred via~~ replication-deficient viral vector is an adenovirus.

7. (Cancelled)

8. (Previously Amended) The method as recited in Claim 5 wherein the protein producing MSCs are topically applied in a concentration of about 50×10^6 per ml of a pharmaceutically acceptable polymer and produce an effective amount of the protein.

9. (Cancelled)

10. (Cancelled)

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11. (Previously Added) The composition of claim 1 wherein the composition is a gel.
12. (Previously Added) The method of claim 5 wherein the composition is a gel.
13. (Previously Added) The composition of claim 1 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).
14. (Previously Added) The method of claim 5 wherein the biodegradable plate comprises poly(lactic acid) (PLLA).